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FRANK HERBERT PALMER, A. M., EDITOR

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EDUCATION

Devoted to the Science, Art, Philosophy and Literature of Education

VOL. XL. NOVEMBER, 1919 NO. 3

Culture and Efficiency; Their Relation to the English Subjects

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I.

TO determine whether the English subjects are essentially cultural or practical is the purpose of this discussion. But before we can judge whether the principles of Culture or of Efficiency should be predominant in the teaching of the English subjects, we must examine closely our two major terms. Many of the misunderstandings and misconceptions we have labored under, many of the blunders we have made in education and life have been due to vague and crooked thinking, to lazy acceptance of hazy catchwords, to traditional notions—heirlooms from a remote past. In this paper, therefore, I propose to devote a good deal of my attention to a consideration of the general principles, then make but a brief application of those principles to the teaching of English. What is Culture? What is Efficiency? And what relation do they bear to the group of English subjects? These I conceive to be the vital questions. The discussion may be poorly proportioned; but if I can clear up the larger problem involved, I shall be content merely to state some of the details of their application.

And first, what is Culture? The reader need not fear that I shall attempt to mark out the exact limits beyond which Culture may not extend, to erect a tight, high fence around it. To define

Culture too straitly is to deny it altogether. It is too spiritual to be embodied in substantial rules; you cannot shut up this genie in a bottle. It is easier to recognize Culture than to analyze it. Yet I must, so far as I am able, resolve it into its elements; I must break up this warm, clear beam of sunlight into the colors that compose it. Clear-cut thinking on this subject were not possible otherwise. It is to this task that I now address myself.

But before I attempt a positive determination of what are the component elements in Culture, before I attempt to answer the question, What is Culture? I wish to attack the question, What is Culture not? For there are two prevalent errors concerning Culture that stand in the way of our analysis.

The first error is that Culture is politeness, polish, good manners, observance of the laws of etiquette. Culture is no such superficial, artificial thing as that. Good manners is a matter of fixed rules, which are altered, like fashions, as ways and customs and modes of living come and pass, which hold sway for a limited time in a circumscribed sphere. What was "good form" a century ago is "bad form" now. What is "good form" in the city is not necessarily "good form" in the country. It is impolite to speak to a stranger in a crowded city street; it is impolite not to speak to a stranger in a lonely country road. Cultivation is not culture; often it is not even indicative of culture. The crude farm boy who fails to lift his hat to a lady may have more true reverence in his heart than the urbane gallant who knows all the pretty ways of social usage. Surely Culture is not such a petty, ephemeral matter; it is essential, unchanging in its attributes, as immutable as truth or beauty. There is no "new" Culture, though we may have new attitudes toward it, may make new discoveries in it. Let us not confound Culture with good breeding, though we should not the less appreciate good breeding and all that it implies.

The second misconception is that Culture is knowledge, usually interpreted as knowledge of the "liberal arts" subjects, of the humanities, of belles-lettres. According to this view, you must be familiar with literature and history, you must be able to read in at least one foreign language, you must have "gone through"

geometry, you must be able to prate glibly about books and authors, painting and music, else you are outside the pale. You may be an estimable person, useful, even influential, but you are not cultured. Now there is a modicum of truth in the foundation-idea of this conception of Culture; as we shall see later, certain subjects undoubtedly contain more cultural food than do others and may thus contribute more generously to the nurture of Culture. But knowledge is never synonymous with Culture, however closely related it may be. One may attain Culture with extremely little knowledge of the so-called cultural subjects, and one may fail to attain Culture after a lifetime spent in the acquisition of the humanities. The setting up of a narrow prescribed list of information as containing the sum and substance of Culture, as including "that knowledge that is the common property of all cultured persons" is destructive of the very essence of Culture. Pray, what is it that makes the knowledge that "agricola" is the Latin word for "farmer" more precious and powerful in life than a knowledge of farming? Why, pray, should knowing about the Rosetta stone be more important in the enrichment of life than knowing shorthand? or knowing what kind of clothes Queen Elizabeth wore be more significant than the ability to make one's self a dress? No single mind can now take all knowledge as its province; no one should arrogate to his subject or group of subjects all the grace and beauty and benignity and humanizing influences of knowledge. Culture can bloom and flourish on the scantiest of learning. What counts is not so much the contents of one's mind as the state of one's mind. Let us not confuse knowledge with Culture, though we should by no means despise knowledge of any kind, whether useful or pleasant.

Along with these two great misconceptions we must place a number of other narrow and perverted ideas of the nature of Culture. I once heard a gentleman of the old school assert very positively that you could always tell a cultured person by the elegance and correctness of his language, adding that a truly cultured person never uses slang. Piffle! I have heard that one who cannot write a good social letter is uncultured. Gammon!

Some one else says you must have traveled widely before you may call yourself cultured. Nonsense! Culture is nothing so definite, so obvious, so recognizable. It does not reveal its presence through such crude tests. The moment you erect artificial standards of this sort, you cheapen and stultify the very idea of Culture. None of these are of the true and authentic nature of Culture, though all may—or may not—make contributions to it or give evidence of its existence.

What, then, is Culture? Its elements, I think, are five: appreciation of beauty, a rich emotional nature under control, many-sided interest in life, sympathy, and a well-trained mind. I shall discuss these elements in the order in which I have named them.

First, a feeling for, an appreciation of beauty, and a full recognition of its gracious influence in the life of men. And by beauty, I hasten to say, I do not mean mere prettiness, mere shapely form or musical sound or fragrant odor or bright, well-harmonized color. A farmer is cutting the purple asters and goldenrod that grow in his fields, and a poet passing by groans at the wanton destruction of beauty. But the farmer may have in his mind's eye a vision of broad fields of wheat, may see that grain feeding Belgian children; he may discern a beauty far finer than that of the poet; he may be mowing down surface prettiness to make room for essential beauty. How beautiful are the gossamer hammocks which the spider swings, during the night, over the herbs and weeds in the fields! But not as beautiful as the delicate and intricate organism by which the spider—which we deem ugly—spins its web. A butterfly hovering above flowers is lovely, yet not so wondrous beautiful as the metamorphosis of the worm into that same butterfly. Serenely beautiful was the death-bed of Tennyson—the majestic figure reposing in such peace and resignation upon the bed, content and hope on his brow, the soft moonlight beaming upon him, and the volume of Shakespeare on his breast. Yes, but not so beautiful as the death of a young American soldier writhing in the slime and muck of a Flanders battlefield in the midst of the hideousness and filth of war.

Not that I would decry prettiness. Flowers, birds' songs, moonlight nights, murmuring streams, these have also their mission, their ministry to the hearts of men. But we have so narrowed our conception of beauty that we have shut out all but this type of beauty and we are prone to condemn those who do recognize and appreciate this type. If one dare to say that he does not enjoy music or poetry, if one is blind to the glory of the sunset, or of a great forest tree in its autumn transfiguration, we call him dead to beauty, we say he has no appreciation of the finer things of life, whereas he has, perhaps, more feeling for the truer and deeper beauties of existence and human relationship, for the deeper harmonies of life than have we professed worshippers of conventionalized, poetic beauty. I do not say he does have; I say he may have. Nor am I saying that everything is beauty, for I know better. What I am endeavoring to say is that beauty is pervasive, multifarious, that she assumes as many shapes as Proteus; we affront her by narrowing her manifestations. Beauty is fitness, beauty is proper relationship. There is a beauty of use, a beauty of conduct, a beauty of service, a beauty of morality, a beauty of truth, far finer and more exquisite than the beauty upon which we devotees of Culture have lavished so much sentiment. I verily believe that no one is cultured who does not have an intense appreciation of beauty and who does not labor that beauty may prevail, but it is no petty, integumentory prettiness that I have in mind when I use that term.

Nor can I call that person cultured who does not possess a broad, rich, emotional nature, and that nature balanced and poised, under control. One must be sensitive to life, must react to the stimuli of life, its glory and sordidness, its comedies and tragedies, its hopes and fears, its beauty and ugliness. He must be eternally aware of them, and respond with the appropriate thrill of happiness or the shrinking and despondency of grief. The fount of his tears must be kept open, his funny-bone must retain its capacity to tingle, his cheek must blanche with fear, his heart swell with grief, his muscles grow taut with indignation, his teeth set with resolution. The cultured person has a

wide gamut of emotions, and his heart-strings vibrate readily to every touch. He feels, feels keenly, strongly, deeply. He whose emotions are atrophied through disuse, he whose bosom is so hard that the arrows of life cannot penetrate it, he who does not thrill, who reins in his feelings too sharply, he lacks one of the intrinsic elements of Culture.

But it is necessary that this strong, virile, emotional temperament be under control. We know very little about the education of the emotions, but I think we know that it consists in encouraging all the elemental human feelings and at the same time purifying them, disciplining them. There are those who fancy that Culture is calmness, apathy, who think it ill-bred to display feeling, who shrink back from anything "common" or human, anything likely to ripple the surface of their lives. This is mere repression. Such persons stand upon the bank of the river of existence, with their boats drawn up on the shore. This is the glory of life: to be swept along by the powerful current of vital human feelings—to love, hate, aspire, fear, laugh, weep, worship, pity—yet to control our course, yea, to make the current serve to carry us whither we would go. And this is one of the masculine factors in true Culture; Culture is sterile without it.

The third element in Culture is not unlike the second. The cultured person has an expansive interest in life; he thinks nothing human to be foreign to him. It is an erroneous idea that the cultured man or woman is detached, impersonal, a star that dwells apart. He inhabits not the palace of art but the house by the side of the road, and into it he invites all kinds and conditions of men and from it he emerges to mingle freely with his fellows. He can hold converse with the old on death and immortality, with the young on love and romance, with the minister on the arts of pastorship, with the hunter on the pursuits of the chase, with the farmer on raising chickens. All is grist that comes to his mill. Though absorbed at one moment in one interest, he can leave it at will and plunge himself into another, perhaps diametrically opposite. The cultured man cannot be a bigot, a partizan; he has too many points of view, can stand in the shoes of too many

other persons. He does not travel continually on the same road, is not tied down to a monotonous routine, is not confined to one field of thought or one round of activities, does not bore you with reiteration of his one song. It is not so much that he contains all knowledge, as that he is accessible to all knowledge. It is not so much his full mind as his open mind. One sure indication of the cultured person is the breadth, the diversity and richness of his scope of interests.

Sympathy is the fourth element in Culture. Here again I wish to enlarge the conventional meaning of the term. By sympathy I mean more than pity: I mean fellow-feeling, rejoicing with them that rejoice, weeping with them that weep. Sympathy implies fellowship, ability to put yourself in the other man's place, to understand his thoughts, his angle of vision. There is no more certain proof of lack of Culture than selfishness, self-seeking, self-absorption, plunging ahead to gratify one's own desires and ambitions regardless of the rights and feelings of others. The cultured man or woman is considerate of other persons, even of the lower animals, because he has imagination enough to enable him to apprehend their states of mind and because, through his kinship with them, he feels for them and with them. Let us not confuse this with mere politeness, mere grace of manner, deference, courtesy. True sympathy goes deeper than that: it is related more closely to benevolence, charity, love. Would you know the cultured man? Does he grieve when his friends are stricken with sorrow? Does he rejoice when his friends make merry? Does he fear with them, love with them? Does he lose himself in them? Can he play with the children and cheer the bed of the aged? Is he kindly, compassionate, catholic in his sympathies, democratically indulgent? This is the man of Culture: he who obeys the golden rule most implicitly.

The fifth attribute of the cultured person is a well-trained mind. There is only one way to train the mind: to employ it in real activities, to engage it in genuine, vital experiences, accustoming it to reflect upon these activities and experiences, to learn from success much and from failure as much as is possible, to judge,

compare, contrast, to remember what is significant and to bring what one remembers to bear on any present problem, to discern clearly the roots of the matter at issue and to ignore what is extraneous, to project one's self outward and forward in imagination. To do all this long enough is to insure a well-trained mind—nothing else will produce it. No formal set of mental gymnastic exercises will suffice, nothing but educative activities often repeated and reflected upon will serve. Memorizing of Latin declensions, conning of geometric laws, tabulating the succession of English kings or of Revolutionary War battles, learning the names and dates of authors and their books—this may produce well-filled minds, not well-trained minds. Studies can train the mind only in proportion as the studies deal with actualities, of personal import to the student. Thus studies become experience, life-material, upon which the mind may reflect, even as upon the events of one's own life.

No one is cultured if he lacks this kind of mind. He may be amiable, attractive, nice, but, lacking a well-trained mind, he lacks one of the dynamic factors of Culture. It is not necessary that the mind be trained logically, it need not be trained in school, may have little of the learning which is traditional in our curriculum; but it must be a mind capable of conceiving clearly, judging justly, balancing fairly, remembering freshly, imagining vividly, concentrating sharply. Such a mind does not in itself constitute Culture, for it sometimes is the property of one who is utterly hard and selfish, impervious to all the finer things of life. Culture requires all five elements: a feeling for beauty, an emotional nature, strong but controlled, varied interests, wide sympathies, a well-trained mind. And these must be fused into perfect union with each other and interfused with the individuality, the intrinsic, temperamental quality of the person, so that the Culture of no two beings, though composed of the same elements, is alike.

I presume this analysis of Culture has pleased neither the old school of thought nor the new. I am not greatly concerned, however, for I think that they are both wrong, that both have sinned the sin of extremes. The old schoolmen will contend I have mini-

mized the knowledge element in Culture. I can hear them quoting Matthew Arnold and Walter Pater and others of my friends and acquaintances, to the effect that culture is the knowledge of the best of the past, that Culture is the sharing in that learning that is possessed by all educated persons. I can only repeat that no one is capacious enough to comprehend all the vast extent of human knowledge, that there is no certain knowledge that can be singled out as specifically cultural, that Culture is more an attitude toward knowledge, an interest and sympathy in all forms of knowledge, and a humility in the presence of true knowledge in any form. Culture implies rather that a stream of knowledge has flowed through the mind, depositing a soil which is alluvial, instinct with generous thought, capable of engendering gracious feelings and beneficent deeds. Doubtless the native richness of the stream is important, but yet more important is the contour and nature of the region through which the stream flows.

And some of the modern educational philosophers may take issue with me because I have claimed too much for Culture. I have claimed much for it, for it is, according to my analysis, the finest flower of human personality. But however desirable and delectable it may be, however much I may envy any one who possesses more of it than I have, it is only a part of one's equipment for life, only one of the strands in the cable by which man tries to climb toward the ideal. Culture, as I have defined it, does not include—though assuredly it does not exclude—those essential qualities that we call spiritual: bravery, humor, religious fervor; and it takes no account at all of the other group of powers that we group under the title of Efficiency. Culture is whole and perfect within itself, we need not broaden it to comprise all virtues in order to justify it; but the human being who possesses only Culture, even in its brightest effulgence, is not whole and perfect within himself. To it must be added Efficiency.

I have no patience with those who insist that Culture and Efficiency are but different aspects of the same quality, reverse sides of the same coin. They are not the same. To use the terms of geometry, they are complementary, not identical. They are not

incompatible—in fact, they are so frequently blended in the human personality that it is sometimes impossible to fix and mark the limits of either; but they are nevertheless widely different in nature, methods, purposes, and accomplishments. Let no one persuade you that Culture leads inevitably to Efficiency, or that Efficiency grows into Culture. Much of our obfuscated philosophy in education has resulted because, perceiving that every one needs both Culture and Efficiency, we have classed the two together, have tried to obtain both by the same means, the same education, have endeavored to make the cultural subjects practical and the practical subjects cultural.

The difference between the two will be made very evident by a brief analysis of Efficiency. We shall not need many words, for concerning this phase of our subject there is not much probability of misunderstanding. In this analysis I shall examine Efficiency at its highest and best, ignoring the sinister associations connected with the term but not necessarily a part of it.

Efficiency implies, first of all, ability to make a good living, to get on and up in the world, to work at some calling skillfully, capably, with deftness and without friction and waste; to succeed, in the material sense of the word, that is, to make money, hold good jobs. As society is now constituted, this means mastery of some one gainful vocation—it matters not what, though, of course, some vocations demand more intelligence or manual skill or physical strength than others.

In the second place, Efficiency implies certain work habits and qualities. Industry, inventiveness, energy, perseverance, patience, thrift, ambition, ability to work rapidly and easily, to eliminate useless motions, to discover the speediest mode of working well—these are some of the most important of work habits and qualities.

Now, this demands intelligence, it demands a well-trained mind. To be sure, in some kinds of work a man may apparently be efficient through sheer skill or animal strength, but even here ingenuity and shrewdness and keen reasoning count. And in the higher callings great efficiency is not possible without a finely-trained mentality. It need not be a capacious mind, it may be a narrow

mind—that depends upon the vocation,—but it must be keen, alert, logical, able to cope with every situation, to follow up every ramification involved in the business in which it is employed.

Physical health and vigor is the fourth factor in the efficient life. This includes all that has to do with preserving and improving bodily well-being, such as practical knowledge of the body and the laws of health, such as play and recreation.

Finally, Efficiency in most vocations is not possible without ability to get on with our fellows. We may not be interested in them especially; but as our success depends upon our power to deal skillfully with those with whom we are brought into contact, it is evident that to be efficient we must study human nature and cultivate certain social graces.

Surely it must be evident that Culture and Efficiency, as thus analyzed, have but few points in common. Culture deals with the spiritual, the emotional, the esthetic; Efficiency rules over the realm of materialism, of practicalness, of utility. Culture enriches the personality; Efficiency, the person. Culture regards life as an exploration; Efficiency, as a business transaction. Culture is esthetic play; Efficiency relates everything, even play, to work. Culture asks, "Is it true? is it beautiful? is it fine and noble?" Efficiency asks, "What are the facts in the case? What does it cost? Does it pay?"

The circles of Culture and Efficiency overlap, it would seem, at only two places: both claim a well-trained intellect, and both establish relationships with human beings. But Culture prizes more highly the broad, sympathetic, catholic mind, the mind open to all truth and beauty; whereas Efficiency prizes more highly the keen, shrewd, practical mind, the mind well-stored with useful facts. And in regard to contact with life, Culture goes out from itself, wanders, somewhat aimlessly, in attractive by-paths, searching—though never directly—for beauty, for the grace and glory of life, for emotional and esthetic experiences. Culture is centrifugal. Culture regardeth not the harvest, except indeed its beauty, seeketh not her own. But Efficiency is centripetal, it relates everything to itself, ignores everything that has no immediate

connection with profit, is impatient with beauty for the sake of beauty, though it cultivates that beauty that is negotiable. In Culture it is what we think of other men that counts; in Efficiency it is what other men think of us.

Or, consider the attitude of the two toward morality. Culture says: "Be honest, for honesty is an aspect of honor, of truth, of beauty; an honest action is in tune with the harmony of life." Efficiency says: "Be honest, for honesty is the best policy." Culture says: "Be courteous, for true courtesy comes from the heart; it is an emanation of love, goodwill, benevolence." Efficiency says: "Be courteous; it's good business."

Let us not be deceived in this matter. Culture and Efficiency are not identical, not even similar. They face in opposite directions. If occasionally they meet at a common equator, yet at their extremes they are as far apart as the poles. Culture cannot be practical; Efficiency, though it assume the clothing and the manners of Culture, remains Efficiency.

But—and here is one of the major tenets in my philosophy—it does not follow that, because Culture and Efficiency are not the same, they are not both essential in life, or that they may not both be acquired by the same person. Or, to state it positively, the well-rounded, evenly-balanced, full-grown individual, the happiest, most useful individual is he who combines within himself the five qualities of Culture and the five qualities of Efficiency: he who can make a good living, be thoroughly efficient, take part in practical affairs, and at the same time live a full, rich, varied life, attaining a fuller measure of Culture every year he lives. Happy is he if his vocation permits and encourages him to view existence from both angles, to travel as far east as west. In no calling, indeed, whether the ministry of the gospel or the ministry of the coal mine, need one renounce the joys and values of either the esthetic or the practical. But since some vocations lean too far in the one direction or the other, we must needs restore the balance by readjusting avocations. Life demands both. We should work and we should play—not work in order that we may have leisure to play, not play that we may have health to work,

but work and play because both are necessary to fulfill our natures, to perfect and complete our lives.

And if this is true, it follows that school education, which is, or should be, training and preparation for complete living, out of and beyond school, by means of complete living within school, should make contributions to both Culture and Efficiency. I say "contributions," for it is evident that school can give but a small portion of either. I would not have John cultured and Will efficient; I would have both John and Will both cultured and efficient. I prefer one man with two eyes to two men, each with one eye.

(*To be concluded in Education for December.*)

Reality.

We only guess our fathers whence they sprang;
The early world with all its griefs and joys,
We only guess of them; spears flesh, shields clang
As yesterday for Homer-reading boys.

—*George Morris Strout.*

English

Professor Frederick Treudley, A. M., Ohio University, Athens, Ohio.

IN his "Talks with Emerson," Mr. Woodbury tells us that the great master of English advised him to spend little time upon the formal art of composition, but simply to acquire experiences and write about them in the most natural manner. Emerson's own writings, especially his journals, afford abundant proof that he practised what he preached. Robert Louis Stevenson tells how he was accustomed to carry with him two blank books, in one of which he would note interesting experiences and matters of observation, and in the other he would set down suggestive extracts from literature he had read, or perhaps descriptions of his own. The note books of Richard Jeffries, the great English naturalist, read as smoothly as his more finished writings, and the same is abundantly true of Hawthorne's and Thoreau's. It was indeed the business of all these men simply, in the words of Ruskin, to "look and tell." They seemed to go about their business as all men do about their daily work, theirs being to catch the more fugitive elements of the life of nature or of the human soul and set them down for men to read. The result of such course of action is to confer a sort of unconscious grace because the writers seem not to be aware of anything else save the expression of experiences which had become a part of the inner life.

Some years since, Professor Bliss Perry published in the Atlantic Monthly a brief account of an interview he had had with Charles Dudley Warner, not long before the latter's death. In the conversation Mr. Warner said to him that he had accustomed himself never to accord an interview with any one, whoever he might be, without giving him undivided attention, for he said that he felt he owed full attention to every one with whom he conversed by reason of the worth of human personality. He

had schooled himself from an early age to listen to all sermons and discourses, however uninteresting they might be, with such attention as to enable him to reproduce them, and cited, as an illustration, a course of lectures which he had once attended and afterwards reproduced out of his memory at the request of the lecturer, who had lost his notes, and had done this more completely than the lecturer himself could have done. He added that when he wrote his volume entitled "Nile Notes, or In the Levant," he shut himself up in a room in Venice with nothing but a dictionary and a thin volume of notes. These cases seem to illustrate the fine words of Holy Writ to the effect that they who lose their lives shall find them.

A careful observation of the style of our great naturalists clearly reveals the same general truth. There is no literature superior in the pleasing simplicity and charm that abounds everywhere than in the writings of Burroughs, Bradford, Torrey, Henri Fabre, and above all in Gilbert White's "Natural History of Selborne" and Walton's "The Complete Angler." These men and others, like Lafcadio Hearn, simply immersed themselves in nature, became sensitive to her subtle life, and in their expressions of experiences illustrate a remark of Emerson concerning the naturalist Huber, to the effect that either he told the bees things or the bees told Huber things. Take Beebe's article in the Atlantic Monthly entitled "A Yard of Jungle Grass," or indeed any of his delightful compositions, and the same truth is to be observed. All that any one has to do is simply to look a little more deeply and with a pure heart into Nature's Arcana to find miracles of beauty and of grace, even as one whose gaze, directed intelligently into the microscope or telescope, finds arising before him new heavens and new earths.

Mr. Roosevelt, in his "African Game Trails," or in recounting his South American experiences, or in his "Autobiography," reveals the same truth. Here is a very great man, clean in life, young in heart, sharp in the power of perception, simple in faith, broad in experience, abounding in joy, bringing his undivided powers to bear upon the problem of getting acquainted with and

revealing to his fellow men worlds of which they otherwise might remain ignorant. Unselfish work somehow tones up the energies of men, lends firmness to their wills and worth to whatever they do. If anywhere the healing touch resides it is in that of the unselfish man.

So one could go through the writings of all the great and distinguished. The charm of Plato and of Aristotle, the grandeur of Dante, the immense influence of Montaigne, that grace of style which made the writings of Rosseau so appealing and lends to Pestalozzi that which is his glory,—all these gifts and qualities are the logical resultants of simple obedience to the advice given by Emerson to Woodbury.

In the writings of Spinoza, than whom was never a finer character, we are taught that in what he calls the imagination, or as we would express it, the self, lies the danger of distortion. It is the projection of one's own personal feelings which, in the nature of things, can be of no general interest, into that which we are endeavoring to recount, which vitiates the product. Truth is universal, is an end, interests all people; whereas feeling is personal, private, is to be kept in reserve. When heat enters into a discussion, truth goes out. Said old Heracleitus, "Dry light is best." So Spinoza taught that man's safety and happiness and power lies in the detachment of his logical faculties from his feelings, so as to find in wisdom, in the seeing of things, in his graphic phrase *sub specie aeternitas,* that which, being true, is true for all men, is true everywhere and forever.

Dan Crawford, an African missionary, returned some few years ago to civilization out of the very heart of the dark continent, where he had been living for twenty-two years almost alone with his dark brother. Those who listened to his public or private utterances, or who have read his volume, "Thinking Black," must often have wondered where he got his brilliancy of style, the pregnancy of his thought, the vividness of imagination therein manifested. But reflection teaches that here is a man who had been profoundly steeped in the sharp and insistent realities of human nature largely untouched by many of the conventionalities

which attend upon civilized life. The customs of the people with whom he was associated, the deep significance of the imagery with which they are accustomed to express their thought, their exceeding retentiveness of memory, keenness of sight and hearing, directness of speech, as well as perversion of ideals, all contribute a chapter of surpassing interest to one seeking to know the art of expression.

All of Jane Addams's writings express the same truth. Here is a woman who deliberately descended into the depths of slum life with the single purpose of lifting a few people up. Every expression she makes in her books reveals rich contact with elemental forces by reason of which every fibre of her inner being has been set to tingling. Whatever she touches she illuminates. And with what a flood of light her career invests the words of our Master, "If I be lifted up I will draw all men unto me." With a firm hand she touches alike all subjects which come within the range of her observation. If she broods upon that "ancient evil" known as prostitution, it is with the purity of light itself. Dealing with poor immigrant women she invests them with a halo belonging to worth. If she directs her attention to organized vice and corruption, her pitiless pen is unsparing. Yet everywhere throughout her writings a vein of optimism is made visible to one able to see the soul of goodness in things evil. No wonder by common consent has she been called the first citizen of Chicago.

Those who have studied the early training of Giotto will recall that he was taught the art of painting in the studio of Cimabue. Here, surrounded by the works of masters, associated with youth whose rivalry spurred him on, living in a time and in a land which held the artist in high favor, he learned to distinguish supreme things from those less supreme, to love them, and to be willing to submit to any discipline or any restraint that these might be brought forth. Studying and working at the same time, he gradually shaped his art until it found perhaps its most perfect flowering in that tower described by Longfellow as

> "The lily of Florence blossoming in stone,—
> A vision, a delight, and a desire,—

The builder's perfect and centennial flower,
That in the night of ages bloomed alone.
But wanting still the glory of the spire."

It was said lately concerning the lamented Mr. Sargent, that his theory of beauty held that everything possesses its charm, even a battered tin dish, and that it is the business of art to look for it everywhere and reveal it. Readers of "Faust" will recall that his hero finds the secret of life in service, that service in this particular case being the reclamation from the sea of land suitable for the support of human life. All this means that whether with the artist one seeks to behold beauty and embody it in living form, or with the doer of deeds, express himself in terms of some worthy work, perhaps in industry or anything else calculated to relieve the tensions of life, or with one like Sir Isaac Newton, "sole voyager on strange seas of thought alone," seeking pure truth undimmed either with feeling or practical use, he who would express himself must look for reality under the terms of the true, the beautiful and the good, and he must understand that these are ends in themselves and alone constitute the meanings of things.

In Dante's "Divine Comedy" the great poet tells us that after his descent into the Inferno and the climbing of the mount of Purgatory he found himself within the Terrestrial Paradise, and after certain experiences with his beloved Beatrice she compels him as the final act of purification, and just before their ascent to Paradise, to drink of the fountains of Lethe and Eunoe, the one of forgetfulness and the other of memory. The philosophy of this act is not difficult to discern. No doubt it meant to symbolize that largeness of growth through which the less perfect, the insignificant and the worthless, disappear in the increased light and quickening for divine things. It is this process which we see revealed in the great literary characters to whom reference has been made, and, further, it illustrates with completeness and is illustrated in return by Paul's philosophy of growth expressed in the following words, "But we all, with open face beholding as in a glass the glory of the Lord, are changed into the same image from glory to glory, even as by the Spirit of the Lord."

Students of Tennyson are aware of the profound attention he gave to the perfecting of the language used to express his thought, but they also are aware, if they have read his great biography by his son, that he was ever brooding over the infinite, like Moses enduring as seeing the invisible, and ever trying to create a suitable dwelling place for this being. As tabernacle and temple alike were beautified as was becoming the dwelling place of the Most High, so the great artist must not allow his message to go clad in ragged garments. Form and substance are but phases of the same thing. They are expressive of what they represent. They never separate. Further, great works of art in a peculiar sense are characterized by light. On Schiller's tomb may be found the words, "Licht, Liebe, Leben." Dante's Paradise is characterized by light, life, music, motion. Everywhere is activity and the consummation and climax of this imagery is to be found in that he likens God to a spark of fire without dimension, flashing, penetrating, illuminating, deathless.

Are Our Schools Producing Results?

E. E. Cates, Los Angeles, California.

"THAT want me." This was said by a boy in the eighth grade of the public school. What are our schools teaching? For what are we paying taxes for their support? The fads and the vocations have so firm a grip upon the schools that the three R's are being strangled. The argument that they fit for life has gained the popular ear, so that now they are like Phaeton driving the horses of Apollo. They are killing every good thing. Perhaps this boy had been taught to say, "That wasn't I," but not in the same way that he had been taught to say that 3 times 4 is 12. He would not say to the grocer that 3 times 4 is 14. Now this was the end of that boy's school days, and he had been taught music, drawing and manual training. Now, I submit, would not the knowledge and ability to say, "It wasn't I," "That doesn't matter," "Whom did you get that from?" "Between you and me," and many another correct expression which 50 per cent of the people use incorrectly, be of as much worth to this or any boy in securing a position in a mercantile or manufacturing concern, as the ability to sing the scale, draw a vase, or make a flower-stand?

Some one has aptly advised, "Know some thing about every thing and every thing about some thing." Long ago Pope said the same thing:

> "A little learning is a dangerous thing;
> Drink deep, or taste not the Pierian spring."

While this may be ideal, it is not possible. To compel every child to sing and to draw is doubtful pedagogy. One of our humorists has said: "I had rather be ignorant than to know so darn much that isn't so." If he meant so much that is useless, he was a true philosopher.

In a quite recent number of the Outlook was an account of the girl ambulance drivers on the French front. There were fourteen in the unit. It was the opinion of the superintendent that these girls kept their machines in better order and were more skillful in finding the disorders and repairing them than were the men. But these girls who came from wealthy and well-to-do English homes, never had any manual training or machine-shop work, and they knew how to dig their ambulances out of a snowdrift without any instruction from Frederick Taylor on how to handle a shovel. The boy on the farm, without any of the frills of the city polytechnic high school, can shoe a horse, repair a reaper, run a gas engine, and build a model henhouse.

The one great lesson that the American boy needs to be taught today is immediate and willing obedience to constituted authority. Many blessings will come to us as the result of the world war, but the greatest good will come to the individual—"our boys." They will come home *men*. Let me explain. The American boy is not obedient; he is not respectful. If he were, half the private schools of the country would have to close their doors. This is a product of our American family life. In the army and in the navy he must obey immediately and willingly; he must be respectful to the officers, and this is what makes a man of him.

Once, when driving by a military school, the gentleman at the wheel remarked, "It was a military school that made a man of me, because there I learned to obey." Roscoe Conkling always revered the memory of the teacher in the country school who gave him a sound thrashing, "Because," he remarked, "it made a United States senator of me." An office boy did not do what the manager had told him to do. When questioned why he had not, he carelessly replied, "Oh, I just didn't want to." The manager knocked him down, which was a very proper thing for the manager to do. When the boy went home that night he complained to his parents, not because the manager had knocked him down, but because they had never taught him to obey.

During a storm the captain of a vessel ordered one of the sailors to go up into the rigging. The sailor hesitated. Quick as a flash

the captain stretched him flat on the deck. Then he turned to the next man and said, "You go." He went. After the storm one of the passengers said to the captain that he thought he had been pretty harsh on the boy. The captain replied, "Did you not know that your own safety and the safety of the vessel depended on the immediate execution of that order." Go into our schools and you will see that greater stress needs to be put on obedience.

The high school and the college graduate are decidedly inefficient. None of them are skilled. None of them take leadership. What can be expected of the rank and file of the modern world when the leaders of American life—men in the professions and in the higher institutions which prepare for the professions, have seemingly gone mad on the question of specialization?

We specialize our grammar school children in bank discount and leave them in lifelong ignorance of what mathematics really means. We specialize our high school youth in battles and sieges and permit them to remain ignorant of the great historic development of mankind through industry and commerce. We specialize our college youth in haphazard electives, each taught by a specialist and most of them unrelated to all the others, and turn that youth out of college a veritable ignoramus in regard to himself and all those other selves with whom his whole subsequent life will be concerned. We send out from our schools of applied science many a man competent to put up a bridge, but not competent to put up a good front among his equals; wise in the handling of formulas, but ignorant of the handling of men; full of little knacks and methods of calculation, but empty of that tact and intellectual skill which are absolutely essential to professional success.

We need to get back to the humanities—not to the humanities of Greece and Rome, as expounded at Oxford and in some universities in America, but the humanities of the twentieth century. For the study of the real humanities implies a working knowledge of mankind—of men.

We have been so overwhelmed with facts and fancies and theories and names and inventions and problems, that we are

forgetting that the main fact in education is results. Whether our youth is to start in a store, in an office, or as a drummer; whether he is to be a minister, a lawyer, an engineer or a doctor, his success depends enormously on his ability to get along with and to handle other men. That success—the highest success which comes through the widest social usefulness—he cannot have unless he is broad, catholic, tolerant, tactful and philosophical—not as a specialist but as a man.

Some time ago a writer in one of the magazines said: "The curse of American scholarship and of American education is the Ph. D. For, in exalting this decoration of the specialist, we are repeating the error of the Schoolmen who confounded erudition, which dries up the soul, with real wisdom, which expands man into almost the very image of the All-Wise. Yet this hall-mark of erudition is today practically essential as a key to a faculty position; and it is so, not because there seems to be any valid educational reason for it, but largely because it was used in Germany and looks well in the college catalog. As a result hundreds of young fellows are starving themselves and impoverishing their parents to secure this decoration.

To get this decoration they are pursuing special investigations—research—by counting the number of adverbial modifiers in Shakespeare, or by sending out questionnaires regarding the proportion of children who suck their thumbs. Having scraped together this fatuous information they spend much time and money in having it printed, in order that another doctorial dissertation may be added to the dustiest shelves of the college library. And these most precious years of a man's life, these years in which the youth ought to be learning how to broaden his mind and his capacities, how to deal with men, and to handle his faculties, his tongue and himself—these the poor fellow is selling for this mess of pottage with which to feed the trustees of some university.

"Having been admitted to the teaching staff of some university, this fledgling Ph. D., if he is to hold his place, must produce something, and that quickly. Half-starved physically, and wholly starved intellectually and socially, his only alternative is to spe-

cialize still more, digging, like a woodpecker, into some wormhole of erudition in the hope of extracting from it a maggot large enough to placate the learned university public accustomed to be fed by young doctors of philosophy. This digging is politely called research; but it is the sorriest counterfeit of the genuine thing, being but perfunctory and profitless grubbing."

Are we producing our due proportion of first class, of great men, of efficient men? To produce men with loins from which will come great contribution to human thought we must make over entirely our whole system of education, so that our youth, instead of being put through vast pages imparting facts, shall be put into small classes under intellectually strong women, and especially under intellectually strong and morally strong men, who will really develop the boy's mind and character. We must then persuade the college authorities not to turn all undergraduates into a jangle of courses taught by specialists, but to lay out for those boys really developing and strengthening coherent work, which shall make them acquainted with men, society, and genuine wisdom. The physicians are getting the nearest to the heart of the problem, by their clinics, their hospitals and "interne" training, through which the embryo physician studies not medicine but human life.

The Case of General Science

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FOR a score of years a marked unrest has characterized the progress of education. In secondary schools, as well as in primary and higher education, the period has been and still is one of change; new studies have been brought to the front, and others relegated to the background. These changes must be regarded as a reflection of the general conditions of the times. The same period has been one of marked industrial and commercial development, of agricultural progress, and of advancement in method in all lines of enterprise. Modifications have reached into every field of human interest. Methods, implements, ideas, quickly become obsolete and are superseded by others, usually for the better; sometimes, we think, for the worse. Education shares in the confusion. It cannot be otherwise with those schools—the great body of our schools—which are public institutions.

Not always, it seems, have the changes followed the most careful thought and a thorough study of conditions, but much of the cut-and-try sort of experimentation, something of the fad and the sensational appears to have had access throughout the whole range of direct educational effort. It has become an age of competition among schools, and the size of the enrollment the measure of success, until much that is embodied in the school curriculum and life savors of an effort to attract attention.

A feature of this transition period is the shifting attitude in the matter of instruction in science. For some reason there has arisen in the high schools a disinclination toward the sciences, and the oft-cited fact of the decline in interest in physics, chemistry and other scientific subjects since 1890 has brought forth a vigorous effort to correct this tendency by the modification of the science courses or by the introduction of a composite course known as

general science, designed to catch the attention of the pupils and to check their waning interest. These motives from all standpoints are worthy, but the question as to what is best to do is as yet unsettled. As one surveys the literature on this subject of the last ten years, he is impressed by its divergence in aim, in argument and in fact. We have not yet arrived at a solution of the problem of science instruction nor at a certainty as to the eligibility of general science to meet the issue. Therefore, an examination of the situation may at this time be profitable as an effort to bring to a focus the results of thought and experience upon this subject, and to present whatever lesson they may convey. It is to be regretted that more statistical information is not available concerning the period in question, so that a wide range of facts from schools with and without general science might be compared. It is inevitable, of course, that in any new movement a large amount of inertia must be overcome, and there is always conflict with the prejudice of conservative minds.

If it were possible to reach an agreement as to the true aims and the best values of instruction in science, we should doubtless have less difficulty in analyzing the claims of general science as compared with the special courses. It will be well, therefore, first to ask what are the aims and the justification of science instruction, and then whether general science meets the requirement.

In science, no less than in other studies, two considerations are important: first, the informational content; second, discipline. As to the former, it includes that great body of knowledge gained by man in his conquest of nature, that knowledge which is not only power, but enlightenment, security, comfort and pleasure, and which, in the last hundred years has led the world forward more than all its progress in the preceding centuries. Such knowledge has reached into the moral and ethical realms of thought, correcting our vision as to men's rights and duties; it has purified and beautified, much to the health of body and mind; it has increased production of food and clothing and wealth of all kinds, such as man has never before known. This heritage cannot be

overlooked. It is as much a part of our lives as history or language or government. It is not enough that scientists know science, the public must know it. The late President Van Hise has pointed out that we now know enough about disease to banish contagious and infectious diseases from the world in twenty years, if that knowledge were applied, but the difficulty of securing legislation on such matters is sufficient commentary on the popular ignorance. And we know enough about agriculture to double present production, and enough about manufacture and conservation vastly to increase in every way the prosperity and happiness of all classes of people.

National power and independence must in the future be proportional to our advancement in science, no less in peace than in war. Consider the part of physics and chemistry in the recent world conflict. What shall we say of the possibilities hidden in future revelations, say in the domain of mechanics, by the discovery of some cheap and universal substitute for the present sources of power.

In the matters of discipline, we are supporting claims not so easily defended. Objections to the doctrine of formal discipline have been raised with some frequency and force. While possibly not so great as formerly supposed, still there is evidence that the transfer of skill and proficiency and habit from one field of operation to another is accomplished in important degrees. Experiments in the fields of memory, discrimination, association, reaction, etc., show transfer from 25 to 75 per cent.*

If science is properly taught, the instructor must insist upon certain things in the students' work. Doubtless much of the failure of science teachers to accomplish the desired result is due not so much to lack of knowledge as to lack of appreciation of the importance of the method. Content with the acquisition of facts by the students, they are indifferent as to the procedure. *First,* let the teacher insist upon exactitude. The attitude that this or that observation is near enough leads eventually to indifferance as to accuracy. In so far it is a compromise of the virtue

*Cameron, Edward H, Formal discipline past and present. Ed. Rev. 56: 133-148. 1918.

of intellectual honesty, and insidiously undermines appreciation of precise and faithful work. The moral quality of honesty rests upon the appreciation of the value of truth. How essential then that this sense of this value be not impaired! *Second,* let the teacher insist upon independence. In this respect the materials of science are an important adjunct of the methods. Here the student is brought into personal contact with fact and substance. His results should represent the conclusions of his own reasoning processes, and not the influence of the teacher or the text. It is the teacher's business to see that the pupil gains confidence in his ability to attack and master a simple laboratory problem. The more self-reliance is inculcated,the more successful the teaching. There is ample ground for the confident faith that this spirit of triumphant enquiry into the hidden secrets of the laboratory lesson will not be willingly relinquished in the face of practical problems in other fields of experience. If there is one thing above all others that men should acquire as a result of scientific study, it is the habit of clear and independent thinking. There is too little of such thinking in the world of affairs, and we are even more the creatures of our intellectual environment than we are of the physical.

Third, the teacher should inculcate in pupils an impartial attitude of mind. Professor Coulter* has set forth the distinction between the study of the humanities and sciences in the words *self-injection* and *self-elimination.* The former is an accompaniment of appreciation which in a word expresses our mental attitude toward literature and history, but in any scientific analysis which would reveal the cold logic of facts, considerations of self and personal interest must ever be excluded. It is this habit of thinking which transcends the passions and emotions and which should go far toward a just and amicable settlement of racial, social and economic contentions.

In one other, the *Fourth* respect, should the teacher's work aim at the cultivation of perseverance in the personality of the pupil. There is no doubt that the capacity for overcoming difficulties in

*Coulter, John M. The mission of science in education. Sch. Sci. and Math. 15: 93-100. 1915.

life is largely reducible to the power of prolonged and persistent attention to things distasteful and wearisome. Not that studies should be made distasteful and wearisome, but if essential training must come through such discipline, let it come. Too much of the present-day argument concerning the modifications of study courses aims at the elimination of hard work, and offers a sugar-coated substitute to a coddled and pampered appetite.

Having considered the basic claims of science in education, let us now turn to the question as to whether general science more nearly reaches this result than do the special courses. The causes and motive of the general science movement are usually attributed to the decline in interest in the special sciences, botany, zoology, physics and chemistry, and the need of some vitalizing changes in the organization and presentation of secondary science.

If we grant, with Huntington* and others, that the decline in attendance upon special scientific courses is due to dislike or little interest on the part of the pupil, we may attribute that fact to a variety of causes, neither of which has anything to do with the actual merits or demerits of the subjects or the teachers. Apparently, one of the main factors in the problem is the great increase in the last twenty or thirty years of the number of high-school subjects offered, particularly in the line of vocational training, which have divided the attention of pupils and diverted them from subjects not so immediately and tangibly productive. Again, as Judd has shown,* the constituency of the high school has greatly changed during the same period and the motives for attending such schools have differed accordingly. Whereas a quarter of a century ago the high school was mainly a gateway to the college, and patronized chiefly by those who sought a liberal, cultural or professional education; now, with its courses in business, trades, home economics, and agriculture, it not only draws its attendance largely from the laboring classes, but in proportion as it emphasizes the vocational subjects, it discounts those which aim at a broad and liberal culture. The idea that those subjects which

*Huntington, E. I. Elementary Science or general science. Sch. Sci. and Math. 17: 47-52. 1917.

*Judd, Charles H. Meaning of science in secondary schools. Sch. Sci. and Math. 12: 87-98. 1912

have not a direct utilitarian value are fit only for the dilettante is a part of the general spirit of the times, which views the practical as the vocational, and which is too purblind to see that those studies which widen a man's vision and enhance his influence are the things which deal with what is best because it is the truest and most fundamental in human experience. It is this spirit which is undermining the scholarship of the colleges as well as the high schools, which shuns hard work, sneers at the scholar as a highbrow or a grind, and passes its time bluffing through courses where learning is made easy and education finished "while you wait."

Professors Coulter and Millikan* agree, however, that the decline in attendance upon the special courses in science is not due to failing interest but to other causes, which are stated: (1) as the crowding back of subjects into the later years of high school, where the registration is always less; (2) the lack of interrelation between the special sciences, resulting in sharp lines of division which allows them to be more easily "crowded off the educational platter," and (3) the dropping of specific college entrance requirements in physics and other subjects.

So much for the causes and motives back of the general science movement. The claims of the advocates of general science may be summed up as follows: (1) that it stimulates interest not only in the subject itself but in the courses in special science which follow; (2) that it has more bearing upon everyday "practical" affairs than do the special sciences; (3) that it serves as a guide to the pupil in making later elections from the different branches of science; (4) that it imparts useful information to pupils leaving high school early; and (5) that it serves as a transition from the work of the grades to the special science courses of the high school.

Let us examine these claims. First, upon what basis of fact does the claim of increased interest rest? It is just here that statistical evidence is most desirable, and unfortunately is inadequate. From one quarter and another come affirmative answers,

*Milliken, R. A. Science in the secondary schools. Sch. Sci. and Math. 17: 379-387. 1917.

but sometimes where more general they fail to sustain the contention. Thalman* writes of the Oak Park High School (Ill.) that in five years, with an increased total enrollment of less than 10%, those electing one science after general science increased by 26%, but those electing a second science by less than 4%. Perhaps the most significant figures are those furnished by the Central Association of Science and Mathematics Teachers report of the Committee on a Four-Year Science Course.† These data represent the enrollment in four high schools in different places for four years before and four years following the introduction of general science. This report shows that the total registration in science, including general science, increased from the first to the second period from 68.8% to 71.4%. But the figures also show that while the total registration in biology, botany, zoology, physics and chemistry in the period before the installation of general science varied between the schools from 47% to 50.6%; in the period following, during which general science was presented, the registration in the same subjects fell between 23% and 27%.

As to the second claim that general science has more practical bearing than the special sciences, it is not necessarily true. The special sciences, as they have usually been taught in later years, have doubtless been too much detached from the usual affairs of life to appeal strongly to the pupil's interest, in view of the strong utilitarian bent of the times, but so also may be the lessons in general science, unless given an obvious application by the text or the teacher. On the other hand, a course in any one of the sciences alone may be filled with practical applications.

The claim that it serves as a guide to later elections falls by its own weight, if it is shown that elections in the special sciences decline after the introduction of general science. So also does the fifth claim, that general science furnishes a transition step from the grades to regular courses in science. Neither of these reasons, however, would seem adequate to compensate for the loss

*Thalman, J. L. Some results of a general science course. Sch. Sci. and Math. 12: 192-193. 1912.

†Caldwell, Otis D. Central Association of Science and Mathematics Teachers' report of the committee on a four year science course. Sch, Sci. and Math. 16: 393-399. 1916.

of time and necessary substitution in an already overcrowded curriculum.

Against the fourth plea, that much useful information may by the means of general science be imparted to those who leave the high school early, there can be no reasonable protest. The more of such information the better.

The objections commonly raised against general science are: (1) That it lacks continuity and unity; (2) that it replaces other sciences in themselves more complete; and (3) the insufficiency of teachers and texts.

As to the lack of continuity of theme, various devices have been proposed as a remedy, which indicates that some advocates of general science recognize its shortcomings in this respect. To center the general science work around physiography, agriculture, or another subject, undoubtedly has advantages for that subject but diminishes the general aspect of the general science course, and accordingly reduces its breadth of interest. To supply a coordinating and correlating motive seems difficult, and to propose the theme of natural phenomena under the headings, *physical environment, plants, animals* and *man,** is merely to disguise the old subjects of physical geography, botany, zoology and physiology. It seems that the discontinuity must in the nature of things be continued if we are to present in one year a balanced course composed of the most significant parts of half-a-dozen sciences. It is the discontinuity which robs the work of much of its effectiveness, for no sooner is interest awakened in one direction than the attention must be turned to another, and it seems very doubtful whether any kaleidoscopic treatment of science can produce more than a passing impression of a disconnected series of facts.

From our previously stated criteria of the value of science instruction, there is no obvious reason why its disciplinary values should not be realized in the treatment of the problems of a general science course, but the body of useful information is greatly curtailed and the pupil can hardly, in the short time allotted, get an insight into any science or an appreciation of its peculiar spirit

*Coulter, J. G. Present tendencies in teaching elementary science. Ed. Rev. 52: 357-371, 1916.

and dominating motive. It is here it seems that the chief objection lies, viz., that the pupil who gets only general science gets no science. It is as if the student of languages were to divide a year into fractions for the study of as many different tongues by selected bits of grammar and composition and in the end know little about any of them. As the profitable study of a language means more than a mastery of the grammar,—it means an ability to understand and appreciate the literature and the people of that language,—so the study of a science embodies more than an introduction to a few conspicuous phenomena,— it must convey the setting of that science in relation to others, its development in human experience, and its great points of cosmic importance.

Considering the objection of the substitution of general science for other courses, there could be little objection if it were the equal of the other courses. In denying the substitution is there not again an unconscious admission of the weakness of general science? Lewis,* speaking of general science in Iowa schools, states that physical geography was replaced in 47 schools, physical geography and botany in 8, physical geography, botany and zoology in 3, physical geography and physics in 3, mediaeval and modern history in 4, and commercial geography in 2. In these cases, of course, the substitution is obvious and admitted. In some others, however, it is apparent only after analysis of the registration, as shown by the figures of Caldwell above referred to. If, in the case of the four schools mentioned, the registration in the special sciences fell off 50% after the introduction of general science, there is but one conclusion possible, and that is that the courses in the special sciences were rejected in favor of general science, since the total registration in all the sciences was not greatly different in the two periods. Considering, furthermore, the fact that 16 units represent the normal amount of high school earnings in four years, and the number of other studies that must receive attention, it is hardly possible for a pupil to elect more than three units of science. If science is not displaced in the pupil's choice some other subjects of equal importance must be, by occupation of one unit by general science.

*Lewis, E. E. General science in Iowa schools. Sch. Rev. 24: 426-435, 1916.

In the third objection, that of poorly prepared teachers and unsatisfactory texts, there is less force. These limitations are probably but temporary, provided that the general science idea proves sufficiently vital and important to insure its persistence and growth. They are the usual accompaniments of a new subject and should be regarded with patience while being improved and perfected. That there is ample ground, however, for criticism at present there can be no doubt. An examination of most of the various texts and manuals, and outlines published in journals, brings disappointment. A decidedly lopsided treatment of the subject betrays at once the authors' particular field of interest. A certain manual contains 35 exercises, of which 15 are in home economics, 9 in physics, 4 in botany, 5 in astronomy and geography, 2 in mineralogy, and 1 in meteorology. Another has 75 in physics and chemistry, 10 in botany, 8 in physiology, 7 in rocks and soils, 4 in zoology, and 3 in meteorology. Another has 42 in physics and chemistry, 24 in physiology, 22 in botany, 2 in meteorology, none in zoology or physiography. Over half of one text (231 pp.) is devoted to physics and chemistry; the balance is divided between six subjects as follows: physiology 87, sanitation 33, meteorology 26, rocks and soils 29, botany 30, and zoology 26. In this case the physical sciences cover 281 pages, while the biological subjects, including physiology and sanitation, are covered in 176. Another treats 9 sciences in 216 topics or paragraphs, of which 14 are devoted to physics and chemistry and the balance, 68, are divided between agriculture, botany, zoology, physiology and sanitation.

Another aspect of the text book matter is the inconsequential nature of much of their materials. Having in mind the argument that general science serves to disseminate practical information and useful knowledge which the special courses fail to do, we are at a loss to account for relatively unimportant facts and experiments which seem to have been included more because they are simple than because they are significant. Is the study of reproduction of a pond scum or a frog any more "practical" as a part of general science than as a part of biology? Or is the subject of capillarity

more important as presented in general science than when a part of the course in physics? If general science is to succeed, it must be with topics which have a larger meaning than the present experiment. It must teach science so that, in the words of Dewey,* "Every pupil who comes under its influence will always find in himself a tendency to turn his crude experiences into a more scientific form, and to translate the bare science he reads and hears back into the terms of his daily life."

Another matter of criticism in the text books, if indeed it does not apply to the basic theory of general science itself, is the inclusion of too much physics and chemistry in many, though not in all, of the texts. If physics and chemistry have been placed in the later years of high school because of their greater difficulty, how can they reasonably be brought forward to pupils just out of the grades? The difficulty of presenting lessons in physics from just this standpoint has been a matter of earnest and disheartened protest from a teacher of my acquaintance, and it is easy to believe that it may be a very general objection.

The demands upon the teacher of general science are exceptional. It must require an unusual versatility to present all phases of a composite course in an effective manner. The teachers, like the writers, are prone to dwell upon those aspects with which, by training or experience, they are familiar, and so warp the course to their own liking and away from the general ideal. And when the teacher and the text have not the same inclinations, the pupil suffers by the misfit. Teachers to handle this work successfully should have broad scientific training in college, but many of those now in the field have little science education of any kind, to say nothing of broad training. If school boards want to put in general science they should demand well-prepared teachers and themselves be prepared to pay for such training.

In conclusion, it may be said that the course in general science as it now stands, while representing a worthy aim, is open to many and seemingly fatal objections. The place for the work that it contemplates is not in the high school, but in the seventh

*Dewey, John. Method in science teaching. Proc. N. E. A. 54: 729-734, 1916.

and eighth grades. The pupils of earlier years are interested in phenomena, and like birds flitting from tree to tree, transfer their attention readily from one subject to another without regard to logical sequence. It is the logical place for the treatment of the isolated subjects which a course in general science demands. This is the logical development of the true nature study and should be concluded in the grades. The work of the high school should present consecutive interests throughout stated courses such as the special sciences provide.

By the demonstration method the teacher may present many simple and yet significant experiments perfectly clear to the mind of the child, whose enthusiasm, those who have had experience will testify, exceeds that of their elder brothers in the presence of nature's varied expressions. Everywhere they are charmed by birds, flowers, insects, the sprouting seeds, the colors of the rainbow and the prism, the magnet and motor and pulley, and endless things that would overflow the time of the teacher to present. I knew one little fellow of the fifth grade who never came to my laboratory without asking to borrow a lens that he might explore the unseen world beyond his range of vision.

For the propagation of useful scientific knowledge there is no place where it will serve more and go further than among the children of the grades. Facts of health and sanitation, of conservation, and many other lines of interest, fall like seeds upon fertile soil. They are carried home and discussed and defended. The older children become, the more divided their interests; hence, from the standpoint of social advantage from the informational content of science, we can safely refer its presentation in simple and far-reaching lessons to pupils below the high school age. The disciplinary effects of scientific instruction must for the most part be left to the special subjects of the secondary curriculum and the college.

Supervised Study

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ONE of the most recent arrivals in the educational world is Supervised Study. The progressive takes its entrance as a matter of fact and feels that it has naturally come to stay, will grow into its majority and come to its rights. The conservative progressive reserves decision and prefers to look the infant over, examining rather critically and carefully before deciding whether it can endure all the tests, trials and tribulations of the educational world. The conservative true to his colors expects, may we say, rather hopes to see its name soon adorning the obituary columns of our educational journals.

One will kindly note that Supervised Study is referred to as a recent arrival. Care is taken to emphasize that it is merely an arrival and is new only to the extent that it has recently come. Infants are neither new nor novel in one sense of the word, because they have a heritage either good, bad or indifferent. Each becomes an embodiment of the social inheritance which antecedents have enjoyed, supplemented, expurgated, remolded and transmitted. Supervised Study is the result of a modified social inheritance which had its origin in the first act of teaching ever perpetrated. It is nothing new.

In early colonial days the doughty schoolmaster from his desk enthroned autocratically upon a platform, called the trembling pupil to appear before him to recite the lesson. Thereupon the pupil approached, handed his book to the master, who proceeded "to hear" the lesson. The routine of the day in the schoolroom was given largely to individual instruction, in which the memory factor was stressed.

As time passed and conditions changed the platforms disappeared, the pupils increased in number, and it became impos-

sible to continue the old method of instruction. The instruction of the individual gave way to that of the class, that each pupil might have an equal and greater share of the teacher's time. But as class instruction developed and aged, the defects began to appear. The individual, as such, was being neglected—a serious defect—and the question arose as to what should be done. The answer came in the addition to the period given for recitation and assignment of lessons, of another period in which students might study and be directed individually in this study. So it may be said that Supervised Study has just arrived. It is new only in the sense that it is a new application of the idea of individual instruction, which is as old as the hills.

The modern philosophy of education has performed its part in preparing the way for the introduction of Supervised Study. The philosopher of education in recent years has spent much time in the interpretation of democracy and in creating an applied philosophy of education. He has come to the conclusion that democracy is dynamic, that to exist it must ever be growing and increasing in efficiency and that education must do its part by stimulating this growth through constantly raising the level of intelligence. In his endeavor to devise means of accomplishing this the educational philosopher thinks that not equality of opportunity but equity of opportunity must be given the youth. He holds that we must recognize that each boy and girl has been endowed by the Creator with different capacities and talents and that it is the obligation of the schools of America to develop each individual to the limit of saturation. No more can our youth be submitted to identical curricula. The mold must be changed to fit the individual, that waste of human aspiration and endeavor may be avoided and that the requirements of the future democracy may be met. Each individual must be given the opportunity for the fullest development and expression of himself. Respect for personality must be the key note of everything democratic. Supervised Study seems to be in harmony with this philosophy. The interaction which it allows between teacher and pupil paves the way for the development of the individual along the lines sug-

gested and gives a mutual understanding which unquestionably renders progress and advantage to the one as a teacher and to the other as a student and participator in the democracy of the future.

The philosopher may enumerate his age by centuries, the pure psychologist by decades, but the educational psychologist is the youngest of them all. This modern offspring has done his part in adjusting the viewpoint of educators, so that they have become mentally receptive of the project of Supervised Study.

Often the most self-evident things have to be placed in our path so that we may stumble over them before we know that they exist. It may seem rather startling to say it, but it was only two or three decades ago that educators began to realize that education dealt largely with a varied mental activity. However, once awakened to the fact, the psychologists found the matter an interesting object for study and research. For instance, research has established the fact that the mentality of human beings may be graphically represented by the curve of intelligence which is perfectly symmetrical. At one end of the curve is a small percentage of geniuses, at the other an equal percentage of subnormals, but most of us are about the average and compose the middle portion. Also gradually were evolved laws which governed the process of thinking as applied to education. The most apt way of expressing it is suggested by Professor Colvin when he speaks of "the fundamentals of the learning process." This establishment of the fact of individual difference and the fundamentals of the process of learning has placed the means of instruction in the hands of the teachers. The period set apart for direction of study permits detection of individual differences and the application of the laws of learning. Thus we find Supervised Study is in keeping not only with the modern trend of educational philosophy but also educational psychology.

A factor which largely contributed to the immediate development of Supervised Study was the failure of the home to provide the atmosphere and convenience for the studying which must be done without the school. In homes where the family was large and resources limited, often the only place for the preparation

of lessons was in the large living room with all its concomitant distractions. Statistics* show a definite correlation between the type of home described and the lack of home study.

With the pupil from the more privileged home diverse social attractions show a correlation with lack of home study and failure in school work. The parents as well as the children have their evenings of being entertained and of entertaining. The homes became hotels rather than hearths. The Lares and Penates deserted the house! What was to be done but for the school to assume the burden! The pupil must not only be given time to recite and receive assignment of lessons, but also to study them within the school, because accomplishment of home work was either hopeless or impractical.

The first difficulty of the administrator who has taken it upon himself to introduce Supervised Study, is in convincing the public of the need of the longer school day necessitated by it. The man in the street does not understand the large problems of education. The fine professional discriminations of the teacher mean nothing to him. The matter must be presented from the standpoint of advantage to his child and, if possible, economy to the community. The advantages of the plan then may be stated for his benefit as follows. The child by studying under the supervision of the subject teacher is prevented from waste effort and uneconomical procedure in preparing the next day's lesson. He is guided by proper methods and is not led astray or weakened as a student by sympathetic, unwise elders and fellow students. There is no misunderstanding of the limits and method of attack of the new lesson, because the teacher is at hand to check up this matter. If the pupil is especially needful of help in a subject the teacher is there to assist. If, on the other hand, the pupil is brilliant and intensely interested in what he is doing the instructor is at hand to satisfy that interest and develop him in proportion to his ability. The argument may also be given to the parent that with the long school day most if not all of the work can be finished in school, so that he will have a free hand to develop his family life as he wishes

*Study by W. C. Reavis, Oakland City, Indiana.

without school hours. Moreover, if properly administered, the extra-curriculum activities of the school under the system of Supervised Study may be carried on without interfering with regular school work. Statistic† of educators show also that under the method of directed study more pupils succeed in their work and that those who repeat as well as those who leave school are fewer in number. Repeaters cost the community money, and the larger the number remaining in school and receiving an education the more assured is the future welfare of the community at the hands of intelligent citizens.

Another problem arises in acquainting the teacher with the fundamentals of the scheme. With a five or six period day not much can be accomplished in the way of Supervised Study if the period is less than sixty minutes. The long period, of course, necessitates more time for recesses than the old scheme of the forty or forty-five minute period. These may well be interspersed between the periods to give relaxation. Ordinarily the long period may be divided into three distinct parts, recitation, assignment and Supervised Study. The teacher should have these divisions clearly in mind. They may be defined as follows. The recitation is that portion of the period where attention of *all* the pupils is directed to the definition of that part of the subject of the day which is unknown; assignment is that portion where the attention of *all* is directed to the definition of the limits of the advanced lesson and the suggestions for attacking it in the most economical way; Supervised Study is that part where the teacher gives attention to the *individual* in his attempt to master the assigned lesson.

Under ordinary circumstances one-half of every period where Supervised Study is evolved should be given to it. The distribution of the time given to recitation and assignment in the other half varies with conditions. The assignment may take the major portion of its half of the period and the recitation a minor part, or *vice versa*. If the recitation is a matter which chiefly concerns the memorizing of facts it need, in many cases, take but a short

†Studies by Loveland, Pottstown, Pa., and Brown, Joliet, Ill.

time. If teachers would realize that they need emphasize only what is not known much useless "hearing" of lessons would be eliminated.

On the other hand, when the ordinary routine is not to be followed and the teacher plans for no Supervised Study but wishes to employ that type of recitation which evolves ideas through discussion, the admirable flexibility of the long period shows itself. In such a situation he may legitimately use the entire period, provided no assignment is given for the next day. Teachers should feel that the full time of the Supervised Study period belongs to the pupils and not to themselves, if a prepared lesson is expected for the next day. Administrators may well lay down rules against encroachment. Since "the spirit is willing but the flesh is weak," it is best to have a signal mark the beginning of the Supervised Study period. When the length of the Supervised Study period is left to the discretion of the average teacher the plan is a failure.

After all is said and done the status of the teacher is similar to that of the gardener. He enriches the ground, loosens the earth, plants the seed, clears away the weeds as they appear, and, in short, supplies all the conditions which are conducive to the growth of a sturdy plant. Yet he has nothing to do with the actual growth. That comes from within and is controlled by a Higher Power than his. The seed will grow in proportion to the power within it, if he supplies the right conditions. He cannot make a crab-apple seed develop a Baldwin tree. But he can make the crab-apple seed produce the best crab apples by supplying good conditions for growth. The teachers are the gardeners of the growing generations which will make the nation of the future. It is, therefore, their tremendous responsibility to supply the best conditions for the nurture and growth of the generations under their guidance. Supervised Study seems to be improving conditions for this growth and meeting the needs of the changes of modern times. Therefore let us have it and have it more abundantly.

The New Teacher and Discipline

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HERE are the usual maxims handed out to new teachers: "Be interesting and discipline will take care of itself." "It is all a matter of personality." "A glance of the eye is sufficient." "Be perfectly self-controlled and nothing will ever happen; your mere presence in the room is enough." Well, perhaps it is, if you look like Catherine of Russia or Carrie Nation. Some of us do not.

At the beginning of my teaching a few devices for sudden and practical application would have been a boon. I realize that such a set of hints will offend the taste of those who consider discipline a sacred gift, like the power of prophesy or the ability to whistle; one has it, they say, or one lacks it, and one without the gift can only envy those more richly endowed. I insist that a new teacher may have the latent ability and yet fail because she lacks a few simple tricks at the start.

In the first place, you can't be "interesting" in a study period. There comes the test, pure and unmingled, especially on the first days, when business is not pressing. Always call the room to order before the bell rings. No group will ever fall silent on one exact instant; not for a novice. They will become quiet either a little before or a little after the gong. If they are absolutely orderly before the bell rings, then when it does ring they have the impression that they are indeed righteous; an impression to foster. Never interrupt the calm of a study hour by directions or criticisms or conferences. There is no more logic in the teacher's disturbing the assembly than in the assembly's disturbing each other. If names must be written on a seating plan, have them written on individual slips of paper, numbered according to desks, and then collect them without the confusion that always threatens the passing around of the seating plan or the inquiring of names in public.

Avoid the habit of being tied to the platform in front of the room. Circulate. The sidelines are a strategic point, and the back of the room is a conning tower. General remarks about order are never effective. If one boy turns around to whisper, do not say, "We must have no communication," but go to the desk of the boy and lay a note quietly upon it, dismissing him from the room with a request to the Principal that the exile may find temporary shelter somewhere. Anywhere. The roomful sees him mysteriously departing. They know exactly why, without any explanation from you. They hear later to what ample fates. This means, of course, capital punishment for the first small offence. It also means no more small offences.

Here arises, naturally, the question of appeal to the Principal. Most young teachers have heard so often that it is all a matter of personality, that they consider the first ripple a proof that their own "personality" is not all it should be. They dislike to offer this proof to their Principal. In sober truth, however, that first ripple is no more a criticism of the new teacher than of the school system or of the Principal himself. The first bits of disorder are only the preliminary steps in the careful mapping out of the general possibilities for the year. After the first week, every class knows to a millimeter how far it can go and what things it can do with any teacher. But something usually has to be done to get these statistics.

The teacher who fails to meet this habit of experiment with an understanding heart is likely to grow bitter in her attitude toward all adolescent life. But there is nothing bitter about the attitude of the culprits. A class of Junior boys whom I frankly adored had once been making life a burden for a substitute. When they came to my room, the last period one day, I decided for my own curiosity to try a psychological experiment. I paused in the business of the hour and told them that I had a question on my mind. I wanted to know why some classes took the trouble to do the same old things to try out a strange teacher. "It isn't because you don't like the substitutes, is it?" said I.

"No!" said they happily.

"And it isn't because you want to make anybody miserable, nor because you really like confusion for its own sake, is it?"

Then one youth unfolded his incalculable length of limb and rose to speak. "It's this way," said he, with simple earnestness. "If you should see a cat going across the road, Miss Warner, you wouldn't hate the cat, and you wouldn't want to hurt the cat, but you'd want to fire a stone at it to see what it would do. It's that way."

Exactly. And it behooves that cat to have a definite plan of action in mind before she starts to cross the road, and to be pursuing it in such a lively way that there will be no temptation to continue experiments.

It is a pity that they have to occur at all. But in study period there is really a temptation. Whether the first conventional experiment turns out to be a whisper or a whistle depends on the standard of discipline of the special school. In either case it is frankly a test, and the result is carefully watched by every one in the room. Therefore waste no time in classifying the offence. It has attracted your attention. That is quite enough. These age-worn peccadillos are too tiresome to tabulate. Deal with the first one that occurs with a quiet finality that exiles the offender. If no offender is allowed in the room, no offences will occur in the room. Then your everlasting "personality" can be that of a considerate and gracious hostess, rather than that of a martinet.

I admit that this is a method of bothering the Headmaster on his busiest days. But in these early stages his course of action can be as impersonal and automatic as yours. Houseroom for the offender and some red tape about readmission the next day will turn the trick. You are appealing to him at the only time when he can be of any possible use to you whatever. After a group of study pupils is nicely started in gay habits of revelry the best Headmaster in the world cannot order them to honor their teacher.

In recitations this method need never be used, for here the teacher is vitally herself, free from the necessity for impersonal calm. Here comes the famous chance to be interesting. Have

everything ready. Begin before the bell. Give rapid directions. Never turn away to talk to anybody, be he prince or principal. Let everything go like clockwork. If it does not, or if there is any undertow of indefinite restlessness, never continue the recitation. Pass out paper like lightning and give an exercise in dictation. No public school child will refuse to take it, and they dislike it of all things most. Dictate something sensible, but do it with speed. Have it understood that if you are not happy in recitation, rapid dictation exercises will unhesitatingly ensue, and public opinion will strongly favor the preserving of your peace of mind. If the study pupils in the back of the room are the criminals, proceed as in study hour, by extermination. Insist on perfection, not by nagging nor by explaining its charms, but by refusing to exist at all without it.

"Don't see too much," says the seasoned pedagogue. That is all right for the seasoned pedagogue, but fatal for the experiment station. See the first thing there is to see, and treat it with finish and despatch. Do not play the game at all except by your own rules. Refuse cheerfully, as a matter of bleak necessity, and substitute dictation exercises, the most sedative things in the world. The point will not long elude the masses.

In all this, have two definite ideals: First, to preserve for each person in a crowded study hall, yourself included, the illusion of solitude for work. Second, to attain in recitation hour the delightful friendly informality which comes only after childish tricks are out of the question, extinct, nil. And the motto is, not punishment, but annihilation.

No earnest teacher likes to talk about this matter. It sounds as if she had "trouble with discipline." At this point, I am myself hesitating for that very reason. Having done it, I can perhaps add one word about my own experience without offence. At any moment during school hours I could welcome to my classroom a visiting committeeman, a visiting parent, an itinerant janitor filling inkwells, or an electrician with a stepladder. I could greet them all after their kind, and they could enter in among us without disturbing our spirits.

Educating Towards Democracy

Charity Mae Voorhees, Plano, Ill.

DOUBTLESS, during the past year, the true meaning of the term democracy has been greatly confused in the minds of the American people. This word is yet in the making and presents a rather vague and idealistic idea. Its real meaning is yet to be discovered. However, as we use the term, let us think of democracy as implying a general education for all people with organized national, social, political and industrial service. It is my aim to show how, by education, we may be prepared to meet this problem. Perhaps, as with democracy, it may be necessary to select one of the numerous understandings of education. The truest and most inclusive is that it consists in the strengthening of the powers of the body and mind by the process of body-building, spirit-building and institution-building; that is, by the elevation of health, of morals, and of the democratic and political institutions of our country.

We of the twentieth century have received an immense heritage from the work of the preceding century in the advancement of education. The nineteenth century was one of achievement, in which physical and intellectual freedom were obtained; in which the forces of nature were advanced; in which were produced men of courage with original ideas and higher ideals.

The first English settlers of our country came here about three hundred years ago with a certain idea of democracy as related to liberty, education, religion and self-government. They carried out their ideas in the schools, churches, and town-meetings. They firmly believed that liberty and self-government had a moral and religious basis, but these people realized that these could not be possible if the people were not intelligent. These settlers contributed freely to the cause of education and were careful to choose only the leadership of educated men. And have not all the men of distinction of that time been men of superior intellect, such as

Captain John Smith, John Winthrop and Captain Miles Standish?

Yet, it has been said that the great amount of illiteracy today is due to the early exaggerated, local independence of the people themselves. The love of our forefathers for learning was so great that the learned men formed in hostile groups at the schools, town-meetings, and even churches, and left no chance for the advancement of the less educated man. Rather he was discouraged instead of influenced. If this be the case, we cannot say that our early ancestors had true democratic ideas; and indeed some changes and advancements have been necessary to correct these imperfections.

Our attention has also been attracted toward a general education of the people, by the Spanish-American War, the Russo-Japanese War, and especially by this Great World War. These wars have not been wars between cannon, guns and men, but rather between the brains and skill of human races. At the outbreak of this war an educational change was ready to take place, and there was a slight uncertainty as how to act; but the twentieth century was the first to use the true forces of democracy. More people from all classes became interested in what was called a readjustment in our educational system. Our schools have either not been sufficiently conscious of their importance or else too conscious, for until recently the higher schools especially were suited to satisfy only the "well-to-do" classes. Less expensive schools and state universities have been established to satisfy other than the "well-to-do," and this change has produced a more democratic spirit. Other advancements since 1900 have been made. The south, which is so much in need of compulsory school laws, has made higher endowments for the schools and the laymen have been given a greater opportunity for advancement. If we, as a people, should take more interest in the character and knowledge of the heads of our schools than in their politics, perhaps we would create a greater interest in education. So, too, our school curriculum before the war was unrelated to the outside world, to the civic, social and industrial life. If instead of four years of Latin we should spend one year in the study of political science, we would perhaps be better acquainted with the history, aims, purposes and functions of public education.

The shortcomings of our democracy are numerous and must be corrected by the following generations. This accomplishment means the correct education of the coming generation. One of the greatest factors of our national unpreparedness at the entrance to this war lay in the fact that education had not sufficient relation to the needs of modern life. It is through the school that this relationship must be taught and developed, but our schools have been so independent that they have failed to come into contact with the real needs of democracy. For instance, it may be said that our state or national government is weak. Why has not this weakness been corrected? Because the students of schools have not been acquainted with the state and its needs; they have not been taught the essentials of good citizenship; yet, it is through these same students that this weakness must be corrected.

In an investigation taken in twelve states and one hundred and nine cities, it was found that four states and twenty-two cities failed to study this last war. These cities even went so far as to take out all European history and geography. This cannot be educating toward democracy, because it takes away the idea of general education. In the eighty-seven cities that did not put emphasis on the world war, six points in favor of democratic advancement were gained: The geography of the world was vitalized and brought closer to the pupil's life; the student was made to see history in its making; the study of economics and the reasons for action were introduced; the needs of peace were deeply impressed on the student's life; the school life and the political and social life of the student were brought into harmony. Americans were acquainted with the world and thus, in a sense, were made citizens of the world. Our one weakness, not only in education but in all phases of life, has been our refusal to put faith in knowledge. If we instill in our souls a desire for knowledge, a faith in that knowledge, and are guided by that knowledge, we shall preserve and elevate our schools and all other institutions. For example, some of our farmers lack faith in the teachings of books on farming, yet those who do have faith in them are successful. The solution of this problem of knowledge does not demand an academic

education, but its solution may be found in a democratic education. This advancement may be partly developed by instilling a social and political responsibility for unity. By improving the social conditions, the morals of the student will be elevated. The social aims of the present are to preserve our health by disposing of the slum districts and the corruption caused by quackery; to obtain efficiency in all lines by training the body and hand as well as the mind. By the introduction of industrial and vocational training, the youth is taught in the school to be self-supporting and self-respecting and by this preparation to earn his living; he is fitted to fight the battles of life; to meet the social demands and the demands of parenthood. His morality is elevated. Then by this schooling of the youth, inefficiency, poverty, disease and crime in later life to a great extent is prevented.

We, as a nation, have failed to make the most of our material and human resources. We have been taught the value of conservation of material resources, why not promote our human resouces? We need to give a real vision of democracy, not only to our people, but to the people of other nations. To meet these two needs, we must have more money for teachers and higher standards must be required for them, in order that the best available teachers may be secured. For the teacher must possess a thorough knowledge of vocational training and democratic education. It is necessary to have more men teachers, and to use less text books and more practical material.

Three subjects especially need to be introduced into our schools: ethics, economics and politics. The first treats of conduct and service. In it the social ideals of high standing and unselfishness are taught and the individual is made more self-regarding. In economics the student is made to perceive a way by which he may become self-supporting and self-dependent. In the last, politics, the first two are really combined, in that they show how men have found means for a harmonious living and how far they have succeeded and failed. In these subjects all people should be interested, and an advancement in education can only be obtained by the education of all people.

This education should start in the home at an early age and be continued through life; for, as the saying goes, "we are never too old to learn." Each year the small child is more closely connected with the state. As long as the child receives tender, loving care, an education and all the possible advantages, it is retained by its parents. But as soon as the child is abused, neglected in any way, or deprived of its natural rights, the state claims the child, and his parents cannot keep him on the claim that "This child is my child." One of the most important factors in the home life is health. The first essential is cleanliness of the home and food. The "health week" observed some time ago helped toward strengthening the relationship between the home, school and work conditions. Health is the foundation of a firm country, and so too of democracy. We are familiar with the benefits of kindergartens and playgrounds in respect to health.

The relation of the school—be it grammar or high—to the world is of the greatest importance. Some one has defined school as "a time and labor saving device, created—with us—by democracy to serve democratic needs." Democracy alone can voluntarily obey laws! But where is the obedience to be taught? In the home in the first place, but for those who do not receive this training in the home it is entrusted to the school. The time for school training is very small, though some days seem never-ending, yet only a few hours of part of a week for two-thirds of a year are given. The time is so limited that it seems unfortunate that obedience and respect must be taught; but still, the laws are made simpler and easier because of this.

If, along with a good course of study, the student indulges in athletics, strength in body, spirit and mind are developed. To be a good member of any institution requires the power of responsibility, individualism, and also of co-operation, that is, the ability of all to act together as a unit. This, perhaps, is best illustrated in the school where the whole student body act, or should act, as a team and for the same interests; as individuals each student and the teacher work together.

The closest ally of democracy is found in the higher educa-

tional institutions, especially if they teach knowledge of the present time; if they extend the boundaries of knowledge; and if this knowledge is scattered in a usable form. By this relationship to democracy the government is made easier, because the people governed are happier and more content. The teacher should be considered as an officer of the state,and a closer relationship between parents and teachers should be reached, as is being done in some places by the Parent-Teacher organizations. A larger use of the schools might bring parents and teachers together, by the using of the schools for voting places, for "movies," and by extending the use of the libraries, gymnasiums, and swimming pools to the public. We constantly hear the cry from all school boards that they are short of money, and the whole expense is on account of the children, and yet they only use the equipment a few hours a day. Why not extend these opportunities to the older people and lift some of the charge from the students' shoulders. Through the "movies" morals, health conditions, and history could be taught. Though many towns are greatly helped by their public library, some are not, and good use of school libraries could be made. One lack in the smaller schools is a good gymnasium, where students and adults might enjoy many leisure hours of exercise and sport.

One of the recent movements which has been adopted by many high schools is either physical or military training, the object being to develop better physical, mental and moral conditions, habits of order, obedience and promptness.

Besides working for health and character, the school must assume the preparation for American citizenship. The responsibility of citizenship is increased by the study of government and politics. More stress needs to be put, not on the political machinery, but on the principles upon which this machinery is based. We need to train in the national and international rights, duties and opportunities which make up the organized government not only of this country but of the world. It is essential that we understand the reasons why Congress meets; of what its powers and duties consist, and in just what ways and with what

purpose it performs its duties. By these teachings a new duty and a greater realization of responsibility will be instilled in the hearts of American citizens.

To those who have not had the opportunity of learning these duties, the recent Americanization movement presents a fine opportunity. Americanization means more than the teaching of the English language. America should stand before us as an ideal, and inspirations should be gained from that word. It is by Americanism that foreign and diverging elements are kept together. Americanization has been defined as giving "the immigrant the best America has to offer and retaining for America the best of the immigrant." This can be best obtained by beginning with the immigrant children. The environment of the child is greatly affected, first, by his neighborhood, which is usually predominantly foreign, for these people are inclined to be clannish, and, in fact, feel very indignant if any of their nationality move to a better, or American, part of the city. In this kind of a neighborhood morals are largely ignored and this develops crime. Secondly, the child is influenced by amusements and newspapers which are cheap and degrading. The social centers and libraries are helpful, but they are still experiments. It is the school which is the main pillar. The schools of the larger cities vary their courses of foreign language according to the district in which they are located. The students enter schools with different nationalities and languages, but they leave them with one common language and the same high ideals of our democracy. The quickest way of teaching English is yet to be found, but it is necessary to have a regulated course of work. This course, however, has to be adapted to those living in a condition of poverty, and again to those in wealth. The development of the ideas and ideals should be the same, but for the former a simpler and easier approach is necessary. The complaint comes that Americanized children lose interest in their homes and lose respect for their parents. One instance, of very many, is that of a Jewish girl who committed suicide because she was ashamed to present her father to her fiancée.

But this can be counteracted by Americanizing the parents as well as the children, and by engaging teachers of strong personality, sympathetic consciousness, and a clear view of Americanism. We have the difficulty of educating the parents because after the day's work they are too tired to attend a night school. Then why have a night school? As long as the child is given skill for work in the school, why not furnish the adult foreigner his schooling in the factory? Due to the fact that two hundred thousand out of every two millions of people are illiterate, Sarah Elkus started this system of schooling in the factories. The English language, civics, and citizenship are the most essential things to be taught under the factory conditions. In New York the factories provide equipment and one teacher for every class of twenty-five organized. Some of the factories refuse to do this, but each day it is becoming more evident that it is a great saving. Fewer accidents are caused, increased efficiency is gained, and less material wasted by the fact that the workman can read, "Handle with care," "Open at this end," "Do not tear," etc. In some factories will be found men who refuse to enter these classes. But why not use the method employed by one of our big manufacturers? If any of his men refuse, they are laid off a couple of weeks to think about it. If, when they return, they still refuse to comply, they are told to look elsewhere for a job. This kind of training will stamp out anti-Americanism and will make a firmer basis for the building of democracy.

A true democracy lifts men to the heights of the best services and achievements; while education places the faith of citizens in the laws, institutions and principles of liberty. Thus democracy and education, standing as allies, are dependent upon each other and give more force to the glorious words of Lincoln, "that government by the people shall never perish from the earth." As our boys enlisted at the nation's call in this recent war, why should not we all, young and old, men and women, enlist in the nation's service, for the advancement of "educating toward democracy."

American Notes—Editorial

Nothing is more fatal to progress in home, school, town or city, state, nation or world, than a spirit of antagonism. A great wave of antagonism seems to have been sweeping over the entire human race. It has involved the nations in the greatest war in history. It has set nation against nation, man against man, brother against brother, father against child. In an earlier age it would have been ascribed to the malign influence of some star or other heavenly body; or to some occult emanation from the spirit world. In this more scientific age, while people differ in the forms of expression it is commonly agreed that it is an outbreak of the badness of the natural man. Some call it "pure cussedness," others "original sin," or "total depravity," or "the spirit of Satan" entering into the human heart. Whatever we call it matters but little. It is here and has to be reckoned with. It seems to the student of history to have come in waves, and we are on the crest of such a wave at the present time. We should realize this and take all due precautions lest we be fatally engulfed. The evil influence besets us upon every side.

A spirit of antagonism among nations means war. It spells impoverishment, famine, woe, death. In the home the same spirit means the end of peace, co-operation and happiness. In the school it destroys the teacher's influence and blocks the pupil's progress. In the community it stops the growth of population and drives away desirable residents. In the church it is fatal to spiritual life, destructive of the spirit of service and is wholly intolerable. Wherever we live and in every occupation and business, we must get into sympathy with our fellow men and not antagonize them. Sympathy opens, antagonism closes the portals of personality. Antagonism is of the Evil One; sympathy is of Christ.

The growth of antagonism is very insidious and subtle. Usually those who are gradually becoming antagonistic are for a long time unaware of the fact. It is not deliberate and from choice. It is like the insidious oncoming of a hidden malady. It often becomes patent to one's friends before it is realized by one's self.. In the home it sometimes manifests its destructive influence between husband and wife; often between one or both parents and a particular child. It is easy for a parent to fall into a habit of criticising and "nagging" a child. It is a matter of "Why did you put on or not put on this or that garment?" "Why didn't you do so and so?" Or "For pity's sake don't associate with this or that boy or girl." How quickly the child recognizes and reacts against the unsympathetic,

critical attitude of the parent! How easily he slips into an attitude of impatience and of self-defence!

Then something infinitely precious has been lost to both parent and child,—something that it is exceedingly difficult to regain or replace. The heart is like the leaves of the "sensitive plant." A touch may close it, though ever so light. After many such antagonistic touches it will no longer open the avenues of responsiveness, so valued by the parent, so important for the future of the child. These avenues have been closed to traffic,—not deliberately, but none the less really and disasterously. Here is one of the great tragedies of the home.

The same tragedy is of frequent occurrence in the school,—and that is why we are penning this paragraph. We want to warn the teacher of the direful influence and results of antagonism. We want to say, "Keep in sympathy with your pupils at all hazards and at any sacrifice. Make them *feel* your love and sympathy and understanding of their difficulties and problems. This will mean their redemption and your salvation as a teacher. You will be *the* teacher whom they will always remember and whose influence will abide with them through life.

The antidote for the poison of a world-wide spirit of antagonism is unselfishness, kindness, meekness, love. Never did the world more deeply need the example and the message of the greatest of all Teachers than it does today.

Continuation of Commissioner Calvin N. Kendall's "Ten Commandments for Superintendents." (See page 130 of October Education.)

"6. I will plan to make use of scales and measurements as a means of testing results of our educational processes. I will try to make teachers familiar with these in order that they may independently judge some of their own efforts.

While scales and measurements by no means reveal the entire worth of teachers to children, they are nevertheless of substantial value. Their use builds up a scientific attitude on the part of teachers. They are of little value, however, unless remedies are applied to correct any defects they may reveal.

7. To improve teachers in service is my supreme duty. No part of my time can be better employed.

No teacher is so good a teacher that he cannot be a better one. All progressive principals and teachers realize this. The teaching corps must be stimulated and kept alive. To make poor teachers good teachers, and good teachers excellent ones is a worthy end. I will

have meetings of teachers in which they themselves will largely participate. I will have class exercises to illustrate some teaching process. These meetings must be positive and constructive. The effect upon teachers should be to encourage and inspire them. After a four-hour school day, teachers will be at their best early in the afternoon.

I will encourage teachers' study classes: first, for the discussion of some educational questions like problem teaching, motivation, and tests, and for the reading of some good book pertaining to education; second, for general culture and improvement.

The superintendent who organized a class for the study and reading of Bryce's "Commonwealth," when that monumental book first appeared years ago, helped to make broad-minded teachers.

As the best teacher throws more responsibility upon the children, so will I, as a school administrator, throw more responsibility upon my assistants, principals and teachers. A superintendent shines in their reflected glory.

I will visit schools and stay long enough to know what is going on.

But when the coffee is bad in the morning, I will not vent my feelings on teachers and children. I will be cheerful and otherwise at my best when in the schoolrooms. This I owe to teachers and children. My schoolroom attitude shall be that of confidence in the teacher.

While I will be impersonally frank in my private criticism of the teacher's work, I will also try to find something to commend. I will religiously try to make my visit an inspiration to both teachers and pupils. They will want me to come again and I shall want to go again.

President Eliot says that the faculty for discerning quickly and surely excellence and virtue in persons, peoples, nature and art is of immeasurably more value than the faculty for seeing weaknesses and sins. This faculty is capable of contributing greatly to happiness as well as to material success.

8. I will be a student of education. I will make myself familiar with the more important of the numerous books about education. I will read some of the contents of the leading educational journals. There is much value in the publications issued by the Bureau of Education at Washington. I know that some successful superintendents attach great value to some of the state reports and city reports, which can be had for the asking.

I must never be content with my own ideals of education. These ideals are subject to change: first, because our knowledge of child nature is by no means fixed, and second, because social and civic and industrial and economic demands are in a state of flux.

In a democracy the schools reflect the ideals of the people. The schools cannot stand still from year to year. Nowhere are they as good as they might be. To know what puropses and practices in the training of children and youth are stable and eternal and at the same time to know what new standards are worthy; to preserve the balance between the old and the new—this constitutes one of the great problems of the superintendent.

Only by being a student of education and society and by consulting the best and wisest in the teaching corps and among men and women outside the schools can the truth be found.

9. I will co-operate loyally and promptly with the Department of Public Instruction. I will see that dust is not found on the state monographs. They should be the constant guides of the teachers. I deem it my duty to support organizations for the welfare of teachers and education—national, state, county and local.

10. I will cultivate cheerfulness, courage and optimism. Most successful business and professional men have these qualities.

A sense of humor will not detract from my usefulness. Indeed, there should be more humor in our schools. There is no place for a grouch in the schoolrooms or school offices."

The reconstruction of home economics courses in elementary and secondary schools is the ultimate object of some research undertaken by a group of instructors in the Home Economics Departments of the University of Chicago and of Iowa State Agricultural College. These investigations have attempted to answer the following questions: (1) What is the present purpose of home economics teaching? This study is based on an analysis of the aims and intended outcomes of home economics instruction as stated in the courses of study, textbooks, and in other literature relating to the field. (2) What is the pupil studying? The answer to this question is based on an analysis of the content of the text and reference books used in 95 per cent of the school systems of the United States which use textbooks, and on an analysis of the content of present courses of study in seventy typical school systems where no texts are used. (3) What can the home teach us? In this connection a survey of three different groups of housewives is being made to determine the effects of home economics teaching upon actual home-making activities and the needs of the home which home economics instruction ought to meet. (4) How can we test the course of study and its results? In this connection

an attempt is being made to devise a practicable system of content and reasoning tests and of tests for measuring skill—for example, skill tests for machine sewing.

We have been earnestly requested to publish the following announcements in Education:

I.

Believing that the pupils of today's schools should be drilled and tested in Americanization words the Institute for Public Service has compiled spelling lists for grades three to eight from the words used in five important American documents. These 1,426 words from the Declaration of Independence, Preamble to the Constitution, Bill of Rights, Lincoln's Gettysburg Speech, and Wilson's War Message, are suggested for daily drill lessons, as among the words may be found many of common usage, and that the lists be used also as a part of the state wide spelling contests and assembly "spelling bees."

The foreword of the "speller" states that these Americanization words may in time come to rank with the standard spelling scales that are quite the rage in American schools. These words, giving the opportunity for ideas that foster citizenship and patriotism, may serve as tests of spelling ability as well as lists made up from business and personal letters or lists compiled by selecting the first word on every twenty-third page of the dictionary.

The Institute for Public Service, 51 Chambers Street, New York City, will without charge tabulate all results that are sent to it, furnish sheets for recording results, and otherwise pass on to teachers any lessons in spelling or in Americanization that may be learned from the use of Americanization words.

II.

Americans need to learn to speak English. This is one of the outstanding facts brought home to all Americans by the Great War. Free institutions cannot be built upon illiteracy. Slovenly English, moreover, is not compatible with either good business or community living.

As a step toward repairing our national linguistic shortcomings the National Council of Teachers of English proposes to set aside the first week in November for a celebration to be known as American Speech Week. This celebration is intended to develop a powerful sentiment in favor of greater clearness, correctness, and appropriateness in the speech of all our people—a speech which shall be English

and not in a foreign language. In schools particularly will this celebration be appropriate. Principals and teachers are urged to appoint committees and make active preparation for the celebration.

Such a celebration has already been carried out in large cities like Chicago, and in whole states, as in Alabama. The results of these experiences are summed up in a pamphlet called "A Guide to Better American Speech Week," compiled by the Secretary of the American Speech Committee of the National Council of Teachers of English and distributed at cost from the office of the Council, 506 West 69th Street, Chicago.

The following is clipped from the *Publishers' Weekly* of July 26, 1919:

"In no field of book-publishing does the manufacturing cost form so large a percentage of list price as in the school book field. Royalties are on a lower percentage scale, sales are in large units which keeps selling costs low, the advertising allowance does not need to be large. Competition is extremely keen with the consequent tendency toward the lowest possible selling price.

This means that the rapidly rising costs of book manufacture have put problems of greatest severity upon these departments. And, as if to make difficulties still more difficult, the exacting character of the average school book contract has to be taken into consideration. One finds it hard to think of any other manufacturer who has been obliged by law to hold to the same prices today that were fixed two or three years ago.

Last year with costs up at least 33 1-3 per cent many publishers changed part of their prices, though with a total increment to the list of only about 5 to 10 per cent. Others curtailed here and there and reduced their output of new titles and waited for things to settle. As far as war-time restriction goes, things have now cleared themselves, but the increased manufacturing costs are now over 50 per cent above what they were two years ago and are not at all likely to come down.

The book dealer who finds his public commenting on an upward tendency in the price of school books can state with confidence that in few commodities has there been so small a percentage of increase."

Book Reviews

EDITOR'S NOTE:—

So many books are sent to this department of EDUCATION that it is impossible to review them all. Naturally we feel under obligation to give preference to the books of those publishing houses which more or less frequently use our advertising pages. Outside of the limitations thus set, we shall usually be able and glad to mention by title, author publisher and price, such books as are sent to us for this purpose. More elaborate notices will necessarily be conditional upon our convenience and the character of the books themselves.

PUBLIC EDUCATION IN THE UNITED STATES. By Elwood P. Cubberley, Professor of Education in Leland Stanford Junior University. Houghton Mifflin Company. Price $1.80.

A sub-title of this book is "A Study and Interpretation of American Educational History," and it is further explained that it is "an introductory text book dealing with the larger problems of present-day education in the light of their historical development." The volume will long stand as an authority on educational affairs and will be used as a text book in Normal Schools and Colleges of Education, and should be read by all superintendents and teachers who wish to grow, professionally. Educational methods have had such an extraordinary development and there have been so many changes both in ideals and methods that the live, ambitious members of the profession will seek with avidity such information and such broad views as are here presented by one who has long been an expert and whose opinion has but to be stated to make it authoritative in the educational world. It is helpful and encouraging to the lay reader or student to note that in the author's opinion the great period of educational development and expansion has been since 1860. He thinks we are now at the beginning of a third period of reorganization, which is to include the high school. He appends to the chapters a short list of topics for investigation and report. The book is a treasure house of inspiration and information.

INTRODUCTION TO ECONOMICS. By J. Roscoe Turner, Ph. D., Professor of Economics and Dean of Washington Square College, New York University. Charles Scribner's Sons. Price $2.50.

This volume—of ample proportions—comes hot from the classroom. It discusses principles. It covers the subject so thoroughly that the author has evidently been over-modest in calling it an "Introduction" to Economics. It is, however, an introduction in that the student is advised and enjoined to read and study other more specialized works after getting a clear view of principles from this book. There are 631 pages of text, exclusive of Introduction, Table of Contents and Index. The print, however, is large and pleasing to the eye. The treatment of the subject is comprehensive, clear and convincing. It will set the student

or general reader on the right track and give him an intelligent and defensible opinion upon the various phases of this important subject, upon which so much of human welfare depends. It will reach its place and fulfil its mission in the classrooms of colleges and universities and can safely be recommended to all business men and women and to those who contemplate entering business. It has the rare merit of being at once profound and yet clear and understandable.

THE WINSTON SIMPLIFIED DICTIONARY. Edited by William D. Lewis, A. M., Ped. D., and Edgar A. Singer, Ph. D. The John C. Winston Company.

This handy desk dictionary has the words, on the double column pages, in black face type, which makes it a very easy matter to look up the word one is after. The pronunciation follows in parenthesis. Then the part of speech is named, and the definition and synonyms, if any, are given. We have had this dictionary in daily use on our desk for several months, and thus far it has never failed us. Its binding, illustrations (many of these full-page colored plates) and price, together with the features mentioned above, make it peculiarly suited to school use.

A STUDENTS' HISTORY OF THE UNITED STATES. By Edward Channing, McLean Professor of History in Harvard University. Macmillan Company.

This well known text book is brought down to date in the present edition, containing in the last twenty pages a brief account of the great World War. It is one of the most thorough summaries of the leading events, parties, personalities, laws and experiences of our country from its beginnings to the present hour, that is to be found anywhere. There is just enough detail to impart necessary information and stimulus to further reading; yet it is not so voluminous as to be staggering to the student who takes it in hand as a classroom text book. It has a secure place in the educational institutions of the land.

THRIFT AND CONSERVATION. (Lippincott's Educational Guides.) By Arthur Henry Chamberlain and James Franklin Chamberlain. J. B. Lippincott Company. $1.50 net.

From this attractive book the subject of thrift can be taught in any school, home or in reading circles, in a most effective way. It is a timely volume in these days of high prices and food scarcity. Such subjects are treated as: true and false economy, waste, food, dress, conservation of the soil, the forests, the national health, the use and misuse of money. It should have a wide reading outside as well as inside of the schools. It is fully and tastefully illustrated.

SELECTIONS FROM AMERICAN LITERATURE. By Leonidas Warren Payne, Jr., Associate Professor of English in the University of Texas. Rand, McNally & Company.

The selections in this book are classified according to locality rather than according to date. There are the following groups: the New York and Middle Atlantic group, the New England group, the Southern group, the Central and Western group. The volume is intended for the use of high school classes in American literature. The selections are representative and there are helpful notes and suggestions.

THE LEAGUE OF NATIONS. THE PRINCIPLE AND THE PRACTICE. Edited by Stephen Pierce Duggan and Sixteen Associates. The Atlantic Monthly Press. Illustrated. 370 pages. Price $2.50.

Those who have collaborated to produce this important volume have undertaken the work in response to a very widespread demand for information on such questions as, What is the philosophy underlying a League of Nations? What are the functions of such a League? How shall it be organized? Shall America become a party to it? How will it affect our historical ideals and practices? A thousand and one such questions arise in the mind of the thoughtful man, and throughout the world people are searching for the true principles, with an instinctive persuasion that some change ought to take place in the relations of the nations. The contributors to the volume before us are among the best qualified to form an accurate estimate of these great questions. They have made an honest effort to help their fellow men in comprehending the world-wide and all-important bearings of the subject. Whether in the class rooms of political science classes or in the hands of the individual seeker after knowledge and light and truth about the way to end war and bring about permanent human prosperity and happiness, this splendid series of discussions has a mission and will well fulfill it.

WAR VERSE. Edited by Frank Foxcroft. T. Y. Crowell Company. Seventh edition. Price $1.25.

A remarkably full collection of best poems inspired by the varied scenes and experiences staged by the great World War. The heart burns as the reader turns from page to page and lives for a brief moment on the battlefield, or in the camping ground, or beside the dead or the dying, or wanders through the hospital wards, or flies above the earth with the "bird-men," or is tossed by the stormy seas on the cruiser or the transport, or sinks to briny depths in the submarine. The range of emotion is deep and wide and high. It is well that someone with taste and good judgment has set himself the task of selecting from the immense mass of material growing out of the emotions of the war, those verses which embody representative experiences. This little volume is having a remarkable sale.

A SOURCE BOOK OF BIOLOGICAL NATURE-STUDY. By Eliot Rowland Downing. The University of Chicago Press. Price $3.00 net.

The University of Chicago Nature-Study Series is achieving a well deserved success. This volume is one that will be widely used because its subject is increasingly popular and one which should be added to the curriculum of all elementary and secondary schools. It provides a comprehensive course in elementary nature science. The animals of pond and stream, the insects and their allies, the birds, animal companions, wayside flowers, common trees, seeds and seedlings, the garden, spore-bearers,—these are some of the topics treated in a scientific and at the same time very practical way. Every child is by nature interested in things of this kind. Those who have animal pets will find instructions about their nature and how to care for them. The eyes of children are observant of Mother Nature. A book like this helps them to rightly interpret what they observe and to understand themselves also more fully and accurately. The volume is handsomely illustrated.

WHAT THE WAR TEACHES ABOUT EDUCATION, AND OTHER PAPERS AND ADDRESSES. By Ernest Carroll Moore. The Macmillan Company. Price $1.20 net.

That the war has had a marked effect on education, in a variety of ways, no one who is conversant with school and college life will for a moment deny. In this volume an experienced and highly competent educator delves deeply into fundamental principles and sets forth the changes that have come about in the conceptions and practices of the teaching profession. The chapter on "Why we get on so slowly" should be read by every superintendent and every teacher. It is a very practical chapter which will reveal a great deal that is wrong to every teacher of English or of Mathematics or of Geography. There are 334 pages in the book, and we wish every teacher in America would read them all with care. It would wonderfully elevate the tone and efficiency of the teaching of today.

Periodical Notes.

Two notable articles in *The Century* for October are (1) Life and Letters of Sir Wilfrid Laurier, by Oscar Douglas Skelton; and (2) The Rediscovery of Christianity, by Glenn Frank. The latter shows the strong contrast between the subjective conception of Christianity of our forefathers, who regarded it as mainly a personal, spiritual and mental experience, and the objective conception in our time, which regards it as a social service.

In *Scribner's Magazine* for October there is an interesting and attractively illustrated article by Jesse Lynch Williams on the Guerin Decorations for the Lincoln Memorial. The article shows how they were done, and gives at least some faint conception of their significance and artistic beauty.

The Outlook for September 24 presents the first lesson in a course in Citizenship, with an Introduction by Dr. John L. Tildsley and Frank A. Rexford of the Department of Education, New York City.

The Scientific American for September 27 contains the last chapter in the series on Our Technical Achievements in the Great War. It gives a graphic view of the cost to each of the participating nations, in dollars, in lives, in tonnage, etc.